Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 2 to 8. These sheet 2/8 – 8/8, which includes Fig. 2, Fig. 3A, Fig. 3B, Fig. 4, Fig. 5, Fig. 6, Fig. 7 and Fig.8; replaces the original sheets. 1A. These Figures 2-8 do not have the copy marks objected to by the Examiner and along with the previously accepted drawings of Figure 1 and 1A, now comprise a complete and allowable set of drawings.

Attachment: Replacement sheets.

Remarks/Arguments

Please reconsider the application in view of the above amendments and the following remarks. Claims 1 and 6 have been amended. Claims 2-5 and 7-19 remain in this application. It is believed that no new matter has been added by way of any the amendments provided herein.

I. Drawings objections under 37 CFR 1.121(d)

Applicant has amended the drawing sheets 2/8 to 8/8 in order to overcome the Examiner objection with regards to copy marks of Figures 2 to 8.

II. Claims Rejections under 35 USC §101

Examiner rejected claims 1-19 under 35 USC 101 because the claimed invention was directed to non-statutory subject matter.

Applicant has amended claims 1 and 6 to recite the feature of "*performing at least one of displaying, storing and transferring the depth matched data*" such that the claim language now emphasizes a physical transformation and a tangible result.

The result of the depth matched data may be implemented in various physical transformations. One of which is the "displaying" of the depth matched data as supported by Figure 1 and the associated description on page 8 lines 21 to 28 as filed, which shows a computer system 18 comprising a display for displaying well logging data and Figures 4 and 5 show the displaying of traces of logging data. Other transformations may include a digital tape recorder 16 that can be used for "storing" well logging signals and line 26 of page 8 describes how such digital signals can be "transmitted or carried" to the computer system 18.

Moreover, the paragraph spanning pages 21 and 22 of the present application as filed specifically described how the depth matched data is either extracted from storage after the logging tool is extracted from the borehole, or is transferred real time to the surface that, for example could be a remote receiver, capable of performing analysis or other processing.

The display, storage or transfer of the depth matched data is able to present information in a variety of forms to a user seeking indications of oil-bearing or gas-bearing strata in the earth. Without accurate depth matching the data sets would be basically useless and thus the display, storage or transfer of such results allows for the very real world application of interpretation and analysis of the data.

III. Claims Rejections under 35 USC §102

Examiner rejected claims 6-7 and 16-19 under 35 USC 102(b) as being anticipated by Kerzner (US 4,517,835).). Applicant respectfully disagrees with the Examiner in this regard and presents the distinctions below.

Claim 6 relates to a method for matching a plurality of data sets using correlation of two average signals corresponding. Indeed claim 6 has been amended to distinguish between "a first and a second" average signals obtained from the corresponding sets of data, which is supported by the paragraph spanning pages 6 and 7 as originally filed. Specifically line 35 describes how an average or median computation is applied to each of the samples (or individual signals making up a data set) and page lines 1-2 describes that a second averaged signal is obtained from a second data set.

The examiner asserts such averaged signals are taught by Kerzner at various passages. However, none of these passages discloses combining the individual signals of a data set for creating an _averaged_ signal for that data set. Moreover, there is no mention of creating a first and a second average signals corresponding to said respective two data sets.

Instead the first passage relied upon by the Examiner is col. 6 lines 56 to col. 8 lines 16, the crux of which is to describe how correlation curves 23A, 24A, 25A and 26A are obtained from four probe pads 23-26 having different intersecting positions x, y, y and z as seen by Figure 1. It is described how the shapes of these correlation curves are compared to determine such displacement (see col. 7 lines 47-50).

Importantly however, it is the "peaks" of the curves that are used to determine the different corresponding elevations in the borehole (for example the peaks of curves 23 A and 25A give the Z and X elevations within the borehole). Thus, this whole passage of Kerzner relies on matching up discrete points or data pairs of corresponding data sets. This is therefore exactly the opposite from taking an average of the plurality of data points of each data set.

The examiner also refers to the activity functions 23B and 25B that are generated from the respective correlation curves 23A and 25A. However, again these cannot be average values since this would require a straight line, where instead the activity functions 23B and 25B clearly shows dynamically changing graphs comprising changing points and not an average value.

Thus, there is no disclosure in Kerzner of creating first and second average signals corresponding to an average of each of the two-dimensional data sets as claimed in the method of the invention. As a conclusion, amended claim 6 is allowable over the prior art and dependent claims 7 and 16-19 are also allowable for at least the same reasons.
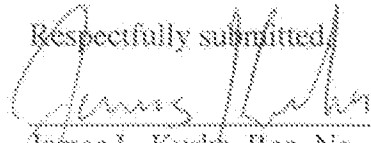
Applicant respectfully requests that a timely Notice of Allowance be issued in this case. Applicant believes this reply to be fully responsive to all outstanding issues and place this application in condition for allowance. If this belief is incorrect, or other issues arise, do not hesitate to contact the undersigned at the telephone number listed below.

The Commissioner is authorized to charge any uncovered fee or any credits, to Deposit Account No. 50-2183 (Reference Number 21.0897).

Respectfully submitted,

Date: 4/23/07

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Attachments